AMENDMENTS TO THE SPECIFICATION

Please replace paragraph [0002] with the following:

[0002] It is a common practice with a network to collect the statistics on traffic. One of conventional schemes for collecting traffic statistics on a network uses an RMON2 (Remote network MONitoring 2) feature particular to an SNMP (Simple Network Management Protocol). The RMON2 feature includes an MIB (Management Information Base) referred to as n1Matrix. The n1Matrix MIB indicates statistics on the transfer of L3 (Layer 3) packets switched via any desired network segment. More specifically, the ~~n1Matix~~ n1Matrix MIB collects information on the headers of L3 packets and stores statistics between end-to-end terminals in the form of a matrix of destination L3 addresses and source L3 addresses. The statistics include the total number of packets transferred and the total number of octets transferred.

Please replace paragraph [0011] with the following:

[0011] In the network shown, each of the network segments Net1 through Net8 includes a terminal and a server, not shown in the figure. The network also includes another network segment Net9 which connects the routers R1 and R2 with each other as well as still another network segment Net 10 which connects the routers R2 and R3 with each other. Likewise, a network segment Net11 connects the routers R3 and R4 with each other while a network segment Net12 connects the routers R1 and R4 with each other. Further, the network includes a network segment Net13 connecting the routers R2 and R4 with each other. In this sense, the network segments Net9 through [[N13]] Net13 are point-to-point network segments.

Please replace paragraph [0012] with the following:

[0012] In the specific network configuration shown in FIG. 1, the NMS 100 is included in the network segment [[Ne1]] Net1 by way of example. FIG. 2 schematically shows the connection of the NMS 100 and a router Ri, which may be any one of the routers R1 through R4, i.e. i=1, 2, 3 or 4. As shown, the NMS 100 uses a network management protocol to send out a

management information collection request to an agent 401, which is included in the router. In response, the agent 401 collects management information 403 particular to the router Ri and sends out it to the NMS 100.

Please replace paragraph [0013] with the following:

[0013] FIG. 3 shows a specific routing table 405 and a specific Use column 407 stored in the individual router Ri. The routing table 405 is generated by a shortest route search scheme. As shown, the routing table 405 includes columns Prot, Destination, Mask, [[Net]] Next Router, Metric and Interface. Prot is representative of the kind of routing, i.e., a network segment C directly connected or information R obtained by a routing protocol. Destination is representative of a destination network segment while Mask is representative of a subnet mask used to determine a destination network segment. Next Router is representative of the address of the next, or downstream with respect to packet flow, router to which the router Ri should send out a packet. Metric is representative of a cost necessary for a packet to reach a destination network segment. Interface is representative of the interface of the router to which the next router is connected. Further, User column 407 lists the total numbers of packets sent via the respective route entries of the routing table 405.

Please replace paragraph [0024] with the following:

[0024] (3) Packets Sent from R1 to Net5

The topology database 111 shows that packets are transferred from the router R3 to the network segment 5. FIG. 14 shows a specific calculation table 124 generated by the generator 101 and relating to the network segment Net5. As shown, in the entry whose index is R1, packets are sent to the network segment Net5 via Next Router R2. Also, in the entry whose index is R2, packets are sent to the network segment Net5 via Next Router R3. The route from the router R1 to the network segment Net5 is therefore from router R1 through routers R2 and R3 to segment Net5. The generator 101 then searches for an entry whose Next Router is R1. In the specific table 124 of FIG. 14, none of the entries includes the router R1 as Next Router, meaning that the router R1 is not used to relay packets to the network segment Net5. The

generator 101 therefore determines that a value e1 listed in the Use column of the entry whose index is R1 shows the total number of packets sent from the router R1 to the network segment Net5. The generator 101 writes the value [[d1]] e1 in a frame R1-Net5, i.e. the frame at which the column R1 crosses the row Net5, in the router-to-network traffic matrix 112.

Please replace paragraph [0027] with the following:

[0027] (5) Packets Sent from R1 to Net7

The topology database 111 shows that packets are transferred from the router R4 to the network segment Net7. FIG. 17 shows a specific calculation table 124 generated by the traffic distribution generator 101 and relating to the network segment Net7. As shown, according to an entry whose index is R1, Next Router having sent packets to the network segment Net7 is R4. The generator 101 then searches for an entry whose Next Router is R1. In the specific table 124 of FIG. 17, none of the entries includes the router R1 as Next Router, meaning that the router R1 is not included in the transit route to the network segment Net7. It follows that a value g1 listed in the Use column of the entry whose index is R1 represents the total number of packets sent from the router R1 to the network segment Net7. The generator 101 writes the value g1 in an ~~r1-Net7~~ R1-Net7 frame included in the router-network traffic distribution matrix 112.

Please replace paragraph [0031] with the following:

[0031] (9) Packets Sent from R2 to Net5

The topology database 111 shows that packets are transferred from the router R3 to the network segment Net5. FIG. 14 shows the calculation table 124 generated by the ~~generator 111~~ generator 101 and relating to the network segment Net5. As shown, in an entry whose index is R2, Next router having sent packets to the network segment Net5 is R3. The generator 101 then searches for an entry whose Next Router is R2, and finds out the entry whose Next Router is R1. In the table of FIG. 14, none of the entries includes the router R1 as Next Router, meaning that the router R2 is included in the transit route to the network Net5. The transit route to the network is therefore from the router R1 via the routers R2 and R3 to the segment Net5. It follows that the number of packets sent from the router R2 to the network segment Net5 include

the packets sent from the router R1 to the network segment Net5. Therefore, the number of packets sent from the router R2 to the network Net5 is e2 – e1. The generator 101 writes the value e2 – [[e2]] e1 in a frame R2-Net5, i.e. the frame at which the column R2 crosses the row Net5, in the router-network traffic distribution matrix 112.

Please replace paragraph [0049] with the following:

[0049] Well, FIG. 21 shows a complete, ~~router-to-internet~~ router-to-network traffic matrix 113 listing all of the numbers of transmitted packets calculated by the procedure described above. In the illustrative embodiment, the traffic distribution manager 102 always stores two traffic distribution matrices 113 inclusive of one established immediately preceding, or upstream with respect to packet flow from, the current matrix 113.

Please replace paragraph [0051] with the following:

[0051] Reference will be made to FIG. 22 for describing an NMS 100a according to an alternative embodiment of the present invention. As shown, the NMS 100a includes a router-network traffic calculator 206 in addition to the traffic distribution generator 101, the traffic distribution manager, 102, the network topology manager 103, the routing table and Use column manager 104 and the management information access 105. The like components are designated with the same reference numerals, and will [[note]] not be described specifically in order to avoid redundancy.

Please replace paragraph [0067] with the following:

[0067] As for the combination [Net1:R1:if2, Net2:R1:if3], FIG. 27 shows a table 311 listing interface statistics particular to the router R1 and including columns Interface, ifOutPkts and ifOutOctets. For the network segment Net1, the calculator 306 selects n1 and x1 corresponding to the interface, i.e. row if2 out of the columns ifOutPkts and ifOutOctets, respectively. Likewise, for the network segment [[N2]] Net2, the calculator 306 selects o1 and y1 corresponding to the interface if3 out of the columns ifOutPkts and ifOutOctets, respectively.

Please replace paragraph [0068] with the following:

[0068] As for the combination [Net3:R2:if1, Net4:R2:if2], FIG. 28 shows a table 312 listing interface statistics particular to the router R2 and also including columns Interface, ifOutPkts and ifOutOctets. For the network segment Net3, the calculator 306 selects m2 and w2 corresponding to the interface if1 out of the columns ifOutPkts and ifOutOctets, respectively. Likewise, for the network segment [[N4]] Net4, the calculator 306 selects n2 and x2 corresponding to the interface if2 out of the columns ifOutPkts and ifOutOctets, respectively.

Please replace paragraph [0069] with the following:

[0069] As for the combination [Net5:R3:if1, Net6:R3:if2], FIG. 29 shows a table 313 listing interface statistics particular to the router R3 and also including columns Interface, ifOutPkts and ifOutOctets. For the network segment Net5, the calculator 306 selects m3 and w3 corresponding to the interface if1 out of the columns ifOutPkts and ifOutOctets, respectively. Likewise, for the network segment [[N4]] Net4, the calculator 306 selects n3 and x3 corresponding to the interface if2 out of the columns ifOutPkts and ifOutOctets, respectively.

Please replace paragraph [0070] with the following:

[0070] Further, as for the combination [Net7:R4:if1, Net8:R4:if2], FIG. 30 shows a table 314 listing interface statistics particular to the router R4 and also including columns Interface, ifOutPkts and ifOutOctets. For the network segment Net7, the calculator 306 selects m4 and w4 corresponding to the interface if1 out of the columns ifOutPkts and ifOutOctets, respectively. Likewise, for the network segment [[N8]] Net8, the calculator 306 selects n4 and x4 corresponding to the interface if2 out of the columns ifOutPkts and ifOutOctets, respectively.

Please replace paragraph [0071] with the following:

[0071] FIG. 31 shows a table 315 listing the interface statistics and completed by the above procedure on a destination network segment basis. The interface statistics manager 307 always stores two sets of consecutive statistics including immediately preceding one.

Please replace paragraph [0075] with the following:

[0075] FIG. 34 shows a router-to-network traffic distribution matrix 814 completed by the above procedure on the basis of the frequency band used.